

Phimosis – Are we on Right Track?

Aditya Arvind Manekar, Narahari Janjala, Subrat Kumar Sahoo, Bikasha Bihary Tripathy, Manoj Kumar Mohanty

Department of Paediatric Surgery, All India Institute of Medical Sciences, Bhubaneswar, Odisha, India

Abstract

Background: Phimosis, a common paediatric condition, is defined as the inability to retract the preputial skin behind the glans. Current practice shows there is some confusion among the paediatricians towards this common condition and in differentiating it from the more common physiological preputial adhesion; leading to frequent referrals to a paediatric surgeon or a general surgeon, which can be addressed by the parents and the child physicians themselves. **Aim:** To find out the awareness towards the management of phimosis among the paediatricians. **Materials and Methods:** A questionnaire on this topic was generated using 'Google Forms' and was circulated among junior and senior residents, faculty in various medical colleges and consultants in private practice all over India and their response was collected and analysed. **Results:** We received a total of 221 responses from all over India from paediatric medicine trainees and consultants. Among them, majority (48%) were senior residents. According to the survey participants, the most (46%) find inability to retract the prepuce as the major presenting complaint. A straight away reference to a paediatric surgeon was preferred by majority of paediatricians (62.9%), though most of them were aware of them were aware of physiological adhesions and conservative management (94.2%). There was a belief among 43% about counselling each and every patient presenting with phimosis for circumcision. Among the respondents, 60.2% advised ultrasound of kidneys, ureter, and bladder to their patients and believed that backpressure changes alter the management of the child. A urine routine examination was advised by 70.1% of participants, with 46.6% believing that the presence of urinary tract infection changes the management of phimosis. Waiting up to 1 year of age before going for surgery was advocated by 71.5%. A major proportion of respondents (76%) believed all cases of phimosis should be referred to a surgeon, only 58.8% would voluntarily follow them up. There is still a belief among 69.7% of participants that all cases of phimosis should be referred to a paediatric surgeon and only few of them, 5.4% feel referring only indicated cases. **Conclusion:** Physiological phimosis is a common condition which can be addressed by the paediatricians themselves. Awareness is to be increased among them, especially during the training period regarding the proper management of this common condition, avoiding unnecessary circumcisions.

Keywords: Circumcision, physiological adhesions, topical steroids

INTRODUCTION

Phimosis is a common presenting symptom in paediatric outpatients and is defined as the inability to retract the foreskin. A big confusion still persists among paediatricians to distinguish between physiological and pathological phimosis, the former needing a conservative management and the latter requiring surgery. This ignorance is a cause of an unwanted parental anxiety and unnecessary and unethical referrals to paediatric surgeons or urologists.^[1,2] It creates a great anxiety about the need for surgery among patients and more among parents, the referrals being unwanted in majority of cases.^[1] An awareness needs to be created among the paediatricians along with the

parents about the nonsurgical management options for physiological phimosis for better outcomes with minimal or no morbidities. In addition, distinguishing features between physiological and pathological phimosis should be part of their training to minimise unnecessary anxiety created by referrals to paediatric surgeons.^[2] To the best of our knowledge, there are no such studies available in the English literature. We, in our study, have attempted to find out the level of awareness among the paediatricians about this common condition.

Address for correspondence: Dr. Manoj Kumar Mohanty,
Department of Paediatric Surgery, All India Institute of Medical Sciences,
Bhubaneswar - 751 019, Odisha, India.
E-mail: pedsurg_manoj@aiimsbhubaneswar.edu.in

Received: 18-09-2021 Revised: 27-11-2021 Accepted: 21-12-2021 Available Online: 19-08-2022

Access this article online

Quick Response Code:



Website:
www.afjpaedsurg.org

DOI:
10.4103/ajps.ajps_143_21

This is an open access journal, and articles are distributed under the terms of the Creative Commons Attribution-NonCommercial-ShareAlike 4.0 License, which allows others to remix, tweak, and build upon the work non-commercially, as long as appropriate credit is given and the new creations are licensed under the identical terms.

For reprints contact: WKHLRPMedknow_reprints@wolterskluwer.com

How to cite the article: Manekar AA, Janjala N, Sahoo SK, Tripathy BB, Mohanty MK. Phimosis – Are we on right track? Afr J Paediatr Surg 2022;19:199-202.

MATERIALS AND METHODS

A simple questionnaire comprising 17 questions [Figure 1], on this management aspect of phimosis was generated using the platform of 'Google Forms.' This "Google Forms" questionnaire was then circulated among the paediatricians all over India, in different stages of their career, starting from junior and senior residents to faculty at medical colleges and consultants in private practice, through e-mails and social media applications, WhatsApp, and Telegram. The responses of the participants were recorded on the Google Forms database and were analysed. Duplicate responses were excluded. Confidentiality was maintained during the entire process. The responses were collected over a period of 3 months from September 2019 to November 2019.

RESULTS

We received a total of 221 responses from all over India for the circulated questionnaire. Among them, majority 48% ($n = 106$) were senior residents, followed by junior residents ($n = 46$, 20.8%), consultants in private practice ($n = 40$, 18.1%) and faculty at medical colleges ($n = 29$, 13.1%).

A significant number of respondents ($n = 186$, 84.2%) reported a consultation of more than 5 cases on an average every month.

Inability to retract the prepuce was the most common presenting complaint ($n = 101$, 46%), followed by ballooning of prepuce ($n = 71$, 32.1%), poor urinary stream ($n = 31$, 14%), urinary tract infections (UTIs) ($n = 14$, 6.3%) and circumcision for religious beliefs ($n = 4$, 1.8%) [Figure 1a].

Around 62.9% ($n = 139$) paediatricians preferred referring the patient to a paediatric surgeon straightaway. Among the rest, 13.1% ($n = 29$) counselled the parents for surgery and then referred the patient to a paediatric surgeon or an urologist; while 11.3% ($n = 25$) examined the patient to determine physiological or pathological phimosis and only 12.7% ($n = 28$) counselled the parents about conservative non-surgical management [Figure 1b].

Most of the paediatricians (94.1%, $n = 208$) were aware of physiological adhesions and the conservative management for the same [Figure 2a]. However, only 68.8% ($n = 153$) advised conservative treatment; while 16.7% ($n = 37$) did not advise conservative management and rest 14% ($n = 31$) were not sure about administering conservative management. Around 43% ($n = 95$) paediatricians believed counselling each and every patient presenting with phimosis for circumcision; while 28.5% ($n = 63$) were not sure whether to proceed with circumcision or not; and the rest (28.5%, $n = 63$) believed in not counselling every patient for circumcision [Figure 2b].

Majority of the participants, 60.2% ($n = 133$) advised ultrasound of the kidneys, ureters and bladder (USG KUB) to their patients, while 20.8% ($n = 46$) did not advise USG KUB and 19% ($n = 42$) were not sure about advising the investigation. However, 29.9% ($n = 66$) believed that the presence of

backpressure changes will modify the management of the patients with phimosis, 10% ($n = 22$) of participants opined that the management does not change and 60.2% ($n = 133$) were unsure about the same [Figure 3a and b].

A urine routine examination was advised by 70.1% ($n = 155$) participants, with 46.6% ($n = 103$) believing that the presence of UTI changes the management of phimosis. Around 14.9% ($n = 33$) of participants did not advise urine routine examination to the patients and 14.9% ($n = 33$) were not sure about advising the investigation. Similar to the USG KUB investigation, 9% ($n = 20$) believed that there is no change in the management if there is UTI, and 44.3% ($n = 98$) were not sure about the same [Figure 3c and d].

Majority of paediatricians (71.5%, $n = 158$) advocated waiting up to 1 year of age before advising on circumcision surgery. However, 12.7% ($n = 28$) believed that circumcision should be done soon after diagnosis, whatever the age may be; 7.2% ($n = 16$) believed in waiting up to 1 month of age and 7.2% ($n = 16$) advised waiting up to 5 years of age. A very small proportion, 1.4% ($n = 3$) believed waiting up to 10 years of age before going forward for surgery.

Regarding the follow-up of these cases, 58.8% ($n = 130$) of participants followed up the referred cases, 31.7% ($n = 70$) followed up the cases only if the patient reverted after referral and 9.5% ($n = 21$) never followed up the referred cases.

Majority of our responders, 69.7% ($n = 154$) still believe all cases of phimosis should be referred to a paediatric surgeon and only few of them, 14.5% ($n = 32$) believed consulting paediatric surgeon and advising a conservative management, 10.4% ($n = 23$) advised conservative management themselves, while 5.4% ($n = 12$) feel referring only indicated cases.

DISCUSSION

Phimosis is one of the most common complaints bringing a child to a child physician. Parents are always over-anxious and over-concerned about this nonretractability of the foreskin in their infant or toddler. Most of these cases end up in surgical interventions in the form of circumcision. Analyses of medical records carried out in England and Western Australia revealed that medically indicated circumcisions were seven times more than the expected incidence of phimosis in children <15 years of age,^[3,4] implying that there is a high rate of unnecessary circumcisions.

In physiological phimosis, the distal portion of the foreskin is healthy and pouts with gentle traction. The narrowed part is proximal to the preputial tip. This differs from pathological phimosis, wherein gentle traction leads to the formation of a cone-shaped structure with the distal narrow part being white and fibrotic. The meatal opening is also narrowed in most cases. It is important to distinguish between these two types of phimosis because their treatments vary widely. Whereas physiological phimosis only needs a conservative approach, surgical management seems justified in pathological

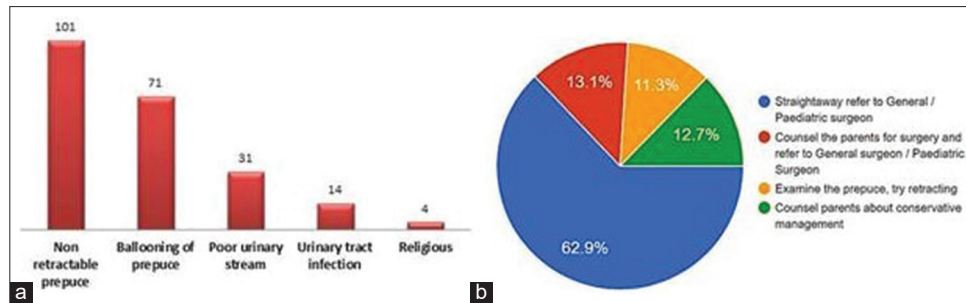


Figure 1: (a) Frequency of common presenting complaints, (b) Initial management

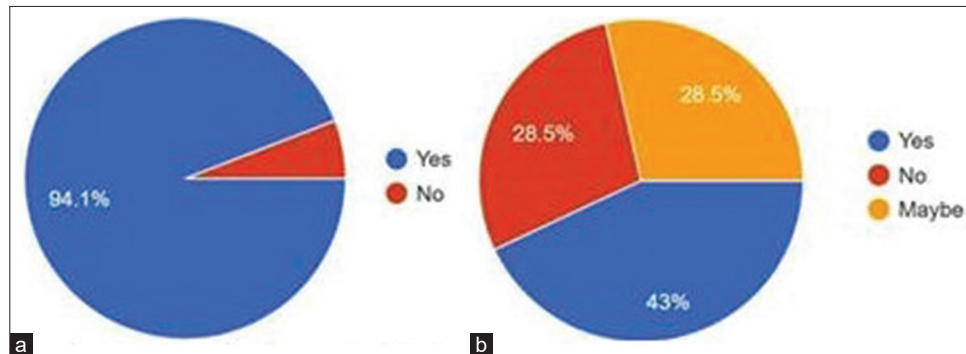


Figure 2: (a) Knowledge of physiological adhesion and conservative management, (b) Advocacy of counselling for surgery

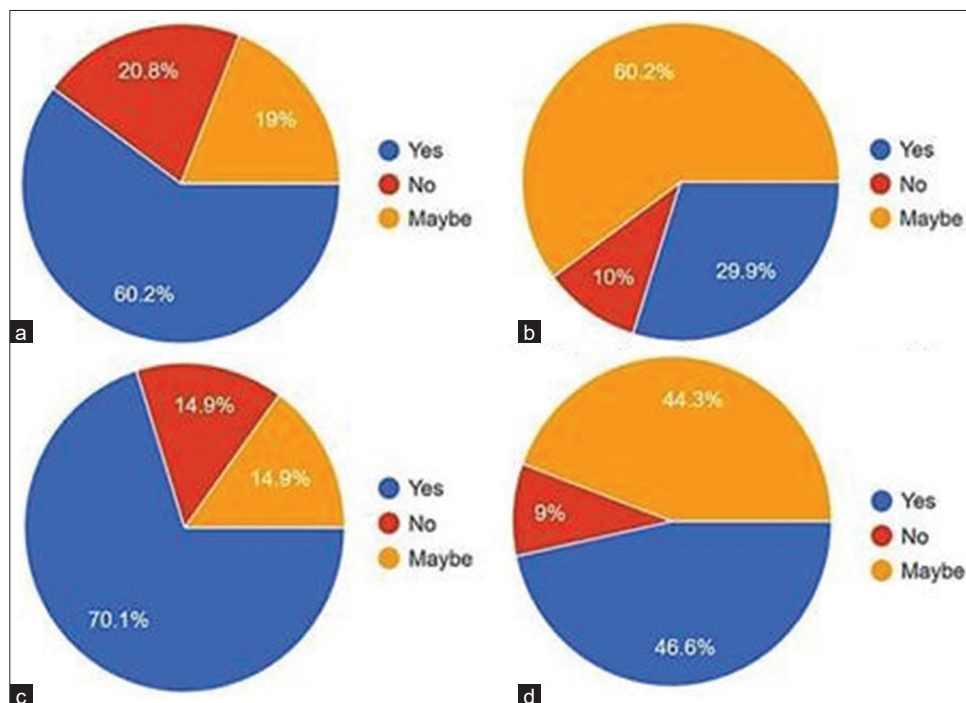


Figure 3: (a) Advising ultrasound of the kidneys, ureters and bladder to patients, (b) Change in management with backpressure changes, (c) Advise of urine routine examination, (d) Change in management with presence of urinary tract infection

phimosis.^[2] However, paediatricians are not trained enough to distinguish between these two types of phimosis.^[4] Their misdiagnosis leads to unnecessary anxiety in parents due to over-referrals to paediatric surgeons for circumcision. Of the cases referred to a surgeon clinic, it was found

that only 8%–14.4% had ‘true’ phimosis needing surgical intervention.^[2,5]

The incidence of pathological phimosis is 0.4/1000 boys per year; that means only 0.6% of boys are affected by their 15th birthday. This is much lesser than physiological phimosis,

which is common in younger children and improves with age.^[4] Diagnosis of phimosis is primarily clinical and no laboratory tests or imaging studies are required. These may be required for associated UTIs or skin infections.^[6] Management depends on the age of child, type of nonretraction, the severity of phimosis, cause and associated morbid conditions,^[2] thus distinguishing it to be a physiological or a pathological phimosis.

In cases of preputial adhesion, parents and caretakers are to be assured that the condition is normal for the age of the child and can be taken care of by keeping the foreskin and its undersurface clean. This has to be demonstrated to the parents and verified whether they have understood the same. Normal washing with warm water, sitz baths and daily retraction of the prepuce gently during bathing with the maintenance of a good preputial hygiene causes the prepuce to retract behind the glans over time.^[7]

Van Basten *et al.*^[8] in their study on the use of topical steroids on 1121 boys with unretractable prepuce for 4–8 weeks found that 75% of patients had achieved complete retractibility of the prepuce, i.e., behind the corona glandis without any systemic or local adverse effects. Steroid topical cream is a painless, less complicated and more economical alternative to circumcision for treating physiological phimosis. Success rates are quite high, especially when patient selection is appropriate and parents are adequately instructed on the application. Compared to circumcision, these less-invasive techniques are associated with lower morbidity and cost.^[9]

Parents' participation in providing proper care for this condition is crucial and it is the physician's duty to guide them with proper methods of preputial care. In a child younger than 1 year, it is adequate just to see the meatus. Between the age of 2 and 5 years, local care should consist of careful retraction and cleaning during bathing with progressive exposure of the glans. Forcible retraction should be avoided because it causes pain and bleeding, contributing to future adhesions and stricture formation that might lead to pathological phimosis.^[10]

Phimosis needs to be differentiated from non-retractile prepuce, which is the rule in young children. The mere thought of referral to a paediatric surgeon creates a great anxiety among the parents. Paediatricians should be trained about distinguishing these two types of phimosis to avoid parental anxiety of unnecessary referrals to a paediatric

surgeon or an urologist. Newer non-surgical modalities such as topical steroids are effective, safe and cost effective for the treatment of phimosis in children and alleviate parental anxiety. Parents should be made aware of these measures to treat phimosis.^[2]

There is no such study found in literature finding the awareness of phimosis and its management among paediatricians. We formulated our questionnaire based on our daily experiences of referral patients of this common condition and the reactions and the apprehension of the parents after referrals.

CONCLUSION

Phimosis is a common condition which can be addressed by the paediatricians themselves. Awareness is to be increased among them, especially during training period regarding the proper management of this common condition, avoiding parental anxiety and unnecessary circumcisions.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

REFERENCES

1. McGregor TB, Pike JG, Leonard MP. Phimosis – A diagnostic dilemma? *Can J Urol* 2005;12:2598-602.
2. Shahid SK. Phimosis in children. *ISRN Urol* 2012;2012:707329. Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3329654/>. [Last accessed on 2020 Nov 29].
3. Spilsbury K, Semmens JB, Wisniewski ZS, Holman CD. Circumcision for phimosis and other medical indications in Western Australian boys. *Med J Aust* 2003;178:155-8.
4. Shankar KR, Rickwood AM. The incidence of phimosis in boys. *BJU Int* 1999;84:101-2.
5. Kumar P, Deb M, Das K. Preputial adhesions – A misunderstood entity. *Indian J Pediatr* 2009;76:829-32.
6. Phimosis and Paraphimosis: Practice Essentials, Epidemiology, Patient Education. Available from: <https://emedicine.medscape.com/article/777539-overview>. [Last accessed on 2020 Nov 30].
7. Caring for the Uncircumcised Penis. Available from: <http://www.cirp.org/library/hygiene/camille1/>. [Last accessed on 2020 Dec 01].
8. Van Basten JP, de Vijlder AM, Mensink HJ. The use of corticosteroid cream to treat phimosis. *Ned Tijdschr Geneesk* 2003;147:1544-7.
9. Steadman B, Ellsworth P. To circ or not to circ: Indications, risks, and alternatives to circumcision in the pediatric population with phimosis. *Urol Nurs* 2006;26:181-94.
10. Orsola A, Caffaratti J, Garat JM. Conservative treatment of phimosis in children using a topical steroid. *Urology* 2000;56:307-10.